

WHAT IS CLAIMED IS:

1. A non-contact tonometer comprising:
  - an alignment light source for projecting a light flux for alignment to a cornea of an eye to  
5 be examined;
  - alignment detection means for receiving reflection light of said light flux for alignment from the eye to be examined to detect an alignment state of the eye to be examined;
  - 10 pressurizing means for blowing a fluid onto the cornea of the eye to be examined to deform the cornea;
  - an intraocular pressure measurement light source for projecting a light flux for measurement  
15 to the eye to be examined;
  - intraocular pressure measurement light receiving means for detecting a reflected light quantity of said light flux for measurement from the cornea of the eye to be examined;
  - 20 deformation detection means for detecting a predetermined output value from said intraocular pressure measurement light receiving means to detect certain deformation of the cornea; and
  - reliability determination means for comparing  
25 an output of said intraocular pressure measurement light receiving means and a reference value to determine reliability;

wherein said reference value is changed in accordance with a detection result of said alignment detection means.

5           2. A non-contact tonometer according to claim 1, wherein said reference value is changed based on reflected light quantity of the alignment light flux from the eye to be examined received by said alignment detection means.

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          3. A non-contact tonometer according to claim 1, wherein said reference value is changed based on a peak value of the alignment light flux reflected from the eye to be examined detected by  
15 said alignment detection means.

          4. A non-contact tonometer according to claim 1, wherein in the case that the determination output of said reliability  
20 determination means is "reliable", a measurement of the intraocular pressure is additionally performed.

          5. A method of measuring intraocular  
25 pressure comprising the steps of:  
          projecting an alignment detection light flux to an eye to be examined;

performing alignment adjustment based on  
reflected light of the alignment detection light  
flux;

blowing a fluid onto the eye to be examined  
5 while projecting an intraocular pressure  
measurement light flux to the eye to be examined;

receiving reflected light of said intraocular  
pressure measurement light flux from said eye to  
be examined and outputting a received light  
10 signal;

determining a reference value to be compared  
with said received light signal based on received  
light quantity of said reflected light of the  
alignment detection light flux; and

15 determining validity of said received light  
signal by comparing said reference value and a  
level of the received light signal.

6. A method of measuring intraocular  
20 pressure according to claim 5 further comprising a  
step of measuring an intraocular pressure value in  
the case that it is determined that said received  
light signal is valid.

25 7. A method according to claim 5 further  
comprising a step of displaying the measured value  
on a monitor in the case that it is determined

that said received light signal is valid.

8. A method of measuring intraocular pressure comprising the steps of:

- 5       projecting an alignment detection light flux  
to an eye to be examined;  
          receiving reflected light of said alignment  
detection light flux from the eye to be examined;  
          projecting intraocular pressure measurement  
10   light flux to the eye to be examined; and  
          determining validity of measurement of the  
intraocular pressure by comparing a reference  
value determined based on said reflected light of  
the alignment light flux from said eye to be  
15   examined and a level of reflected light of said  
intraocular pressure measurement light flux.